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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/886,486	06/22/2001	Edward J. Hogan	AP33454-070457.1023	6096

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EXAMINER

WORJLOH, JALATEE

ART UNIT	PAPER NUMBER
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3621

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,486

Applicant(s)

HOGAN ET AL.

Examiner

Jalatee Worjloh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4-7</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

1. Claims 1-11 have been examined.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1 and 6 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims are directed to a process that does nothing more than manipulate an abstract idea. There is no practical application in the technological arts. All that is necessary to make a sequence of operational steps a statutory process within 35 U.S.C. 101 is that it be in the technological arts so as to be in consonance with the Constitutional purpose to promote the progress of "useful arts." *In re Musgrave*, 431 F.2d 882, 167 USPQ 280 (CCPA 1970). Also, a claim is limited to a practical application when the method, as claimed, produces a concrete, tangible and useful result: i.e. the method recites a step or act of producing something that is concrete, tangible and useful. *See AT&T v. Excel Communications Inc.*, 172 F.3d at 1358, 50 USPQ2d at 1452. .

Claim Objections

3. Claim 6 objected to because of the following informalities: undefined acronym, change BIN to "bank identification number (BIN)" in line 2. Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over US Publication NO. 2003/0120615 to Kuo in view of US Patent No. 5724424 to Gifford.

Kuo discloses generating a secret key associated with said payment account number, using said secret key to generate a message authentication code specific to said transaction (see abstract, paragraph [0055], lines 3-6), generating an authorization request message including said message authentication code, forwarding said authorization request message over said payment network to said check site for verifying the authenticity of said message authentication code, and responding to said authorization request message over said payment network based on said available funds and said transaction amount (see paragraph [0014]). Kuo does not expressly disclose verifying the message authentication code by said check site using said secret key. Gifford discloses verifying the message authentication code by said check site using said secret key (see col. 6, lines 50-52, 64 and 65; col. 10, lines 30-52). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method disclose by Kuo to include the step of verifying the message authentication code by said check site using said secret key. One of ordinary skill in the art would have been motivated to do this it provides an additional level of data security.

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6. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo and Gifford as applied to claim 1 above, and further in view of US Publication NO. 2001/0034720 to Armes.

Kuo discloses an authorization request (see claim 1 above). Kuo does not expressly disclose the request message is routed over said payment network based on a special identification number corresponding to said check site. Armes discloses request message is routed over said payment network based on a special identification number corresponding to said check site. (see paragraph [0082]). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method disclose by Kuo to include the step wherein the request message is routed over said payment network based on a special identification number corresponding to said check site. One of ordinary skill in the art would have been motivated to ensures that the proper bank/issuer receives the request; hence, preventing an unauthorized bank/issuer from accessing the request.

Referring to claim 3, Kuo discloses generating a secret key (see claim 1 above). Kuo does not expressly disclose providing software at a user location for generating said secret key. Gifford discloses providing software at a user location for generating said secret key (see col. 5, lines 60-67; col. 6, lines 1,2 and col. 10, lines 30-53). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method disclose by Kuo to include the step of providing software at a user location for generating said secret key. One of ordinary skill in the art would have been motivated to do this because it provides a way to effectively combat consumer fraud (see Kuo, paragraph [0017]).

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Referring to claim 4, Kuo discloses the payment account number is issued by an issuer and said response is provided by said issuer (see paragraph [0014]).

Referring to claim 5, Kuo discloses an authorization request message (see claim 1 above). Kuo does not expressly disclose the message includes an expiration date field and said message authentication code is placed in said expiration date field. Gifford discloses the message includes an expiration date field (i.e. "valid time period") and said message authentication code is placed in said expiration date field (see col. 6, lines 3-49; col. 10, lines 30-53). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method disclose Kuo to include the step wherein the messages includes an expiration date field and said message authentication code is placed in said expiration date field. One of ordinary skill in the art would have been motivated to do this because it provides a way to effectively combat consumer fraud (see Kuo, paragraph [0017]).

7. Claims 6-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuo and Gifford in view of Armes.

Kuo disclose generating a per-card key associated with said payment account number, generating a message authentication code (MAC) using said per-card key, generating a MAC verification request including said payment account number and said MAC (see abstract, [0014] and [0055]). Kuo does not expressly disclose verifying said MAC, based on said verification, creating an expected transaction sequence number (ETSN) for said MAC, providing said check site with reference data associated with said ETSN, generating a second message authentication code using said ETSN and said per-card key, routing said second message authentication code to said check site based on said BIN associated with said check site, determining said per-card key

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associated with the payment account number of an unverified message authentication code having associated ETSN and reference data, and verifying said second message authentication code by said check site using said determined per-card key, and said associated ETSN and reference data. Armes disclose routing said second message authentication code to said check site based on said BIN associated with said check site (see paragraph [0082]). Gifford discloses verifying said MAC (see co. 10, liens 30-52), based on said verification, creating an expected transaction sequence number (ETSN), i.e. "next expected string", for said MAC, providing said check site with reference data (i.e. "transaction identifier") associated with said ETSN, generating a second message authentication code using said ETSN and said per-card key, determining said per-card key associated with the payment account number of an unverified message authentication code having associated ETSN and reference data, verifying said second message authentication code by said check site using said determined per-card key, and said associated ETSN and reference data (see col. 11, lines 33-44; col. 5, lines 51-57). Notice, Gifford teaches a database that "can hold for each sender a list of random authorization strings, or can hold a sender specific secret key that was used to generate the list of authentication strings along", which implies that a 2nd, 3rd, ..., n message authentication code can be generated and verified. Thus, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method disclosed by Kuo to include the steps of verifying said MAC, based on said verification, creating an expected transaction sequence number (ETSN) for said MAC, providing said check site with reference data associated with said ETSN, generating a second message authentication code using said ETSN and said per-card key, routing said second message authentication code to said check site based on said BIN associated with

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said check site, determining said per-card key associated with the payment account number of an unverified message authentication code having associated ETSN and reference data, and verifying said second message authentication code by said check site using said determined per-card key, and said associated ETSN and reference data. One of ordinary skill in the art would have been motivated to do this because it provides an additional level of security for the transported data.

Referring to claim 7, Kuo discloses generating a message authentication code (see claim 6 above). Kuo does not expressly disclose converting said second message authentication code into a pseudo expiration data using said reference data, generating an authorization request having an expiration date field containing said pseudo expiration date and responding to said authorization request and verifying said second message authentication code based on said pseudo expiration date. Arnes discloses converting said second message authentication code into a pseudo expiration data using said reference data (see paragraph [0056]), generating an authorization request having an expiration date field containing said pseudo expiration date (see paragraph [0059], lines 37-57; [0070] and [0073]) and responding to said authorization request and verifying said second message authentication code based on said pseudo expiration date (see paragraph [0085]). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method disclose by Kuo to include the steps of converting said second message authentication code into a pseudo expiration data using said reference data, generating an authorization request having an expiration date field containing said pseudo expiration date and responding to said authorization request and verifying said second message authentication code based on said pseudo expiration date. One of ordinary skill

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in the art would have been motivated to do this because this provides additional level of security to the transmitted data and reduces the incentive for stealing the payment account data.

Referring to claim 8, Kuo discloses generating a message authentication code (see claim 6 above). Kuo does not expressly disclose the message authentication code further includes using an expiration date, application version number and transaction sequence number associated with said payment account number. However, this difference is only found in the nonfunctional descriptive material and is not functionally involved in the step recited. The generating a message authentication code using said per-card key would be performed the same regardless of the data. Thus, the descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have obvious to a person of ordinary skill in the art at the time the invention was made generate a message authentication code including any type of data because such data does not functionally relate to the steps in the method.

Referring to claim 9, Kuo discloses generating a MAC verification request (see claim 6 above). Kuo does not expressly disclose the MAC verification request further includes said application number and said expiration date. However, this difference is only found in the nonfunctional descriptive material and is not functionally involved in the step recited. The generating a MAC verification request including said payment account number and said MAC would be performed the same regardless of the data. Thus, the descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32F.3d 1579, 32

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USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have obvious to a person of ordinary skill in the art at the time the invention was made generate MAC verification request including any type of data because such data does not functionally relate to the steps in the method.

Referring to claim 10, Kuo discloses generating a MAC using a per-card key, and generating a MAC verification request (see claim 6 above). Kuo does not expressly disclose verifying a MAC, wherein said step of verifying said MAC includes using said per-card key. Gifford discloses verifying a MAC, wherein said step of verifying said MAC includes using said per-card key (see col. 6, lines 50-52, 64,65; col. 10, lines 30-52). At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the method disclose by Kuo to include the step of verifying the MAC includes using said per-card key. One of ordinary skill in the art would have been motivated to do this it provides an additional level of data security.

Referring to claim 11, Gifford discloses providing said check site with reference data associated with said ETSN (see claim 6 above). Gifford does not expressly disclose said reference data includes a number of months indicator. However, this difference is only found in the nonfunctional descriptive material and is not functionally involved in the step recited. The providing said check site with reference data would be performed the same regardless of the data. Thus, the descriptive material will not distinguish the claimed invention form the prior art in terms of patentability, see *In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994). Therefore, it would have obvious to a person of ordinary skill in the art at the time the invention was made provide said

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check site with reference data, the reference data including any type of information because such data does not functionally relate to the steps in the method.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jalatee Worjloh whose telephone number is 703-305-0057. The examiner can normally be reached on Mondays-Thursdays 8:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Trammell can be reached on 703-305-9768. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306, 703-746-9443 for Non-Official/Draft.

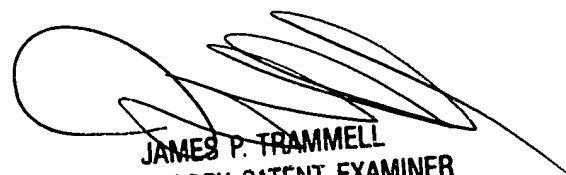
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Any response to this action should be mailed to:

***Commissioner of Patents and Trademarks
PO Box 1450
Alexandria, VA 22313-1450***

Hand delivered responses should be brought to Crystal Park 5, 2451 Crystal Drive, Arlington, V.A., Seventh floor receptionist.

February 18, 2004


**JAMES P. TRAMMELL
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